

**Abstract of the Disclosure:**

A method of automatically queuing calls for later transmission in connection-oriented networks instead of blocking them when network resources are unavailable at the time the request is received, as currently done. A simple call queuing method holds up call setup messages at each switch along an end-to-end path of a network until resources become available. This simple, known queuing method suffers from poor network utilization and long call queuing delays. However, if calls that can be queued have known holding times, a call scheduling method that results in reduced call queuing delays and improved network utilization according to the present invention can be realized.